Final script from "Adult Immunization Update" satellite broadcast, June 26, 2003.

Harold Margolis segment (reaching high risk populations with hepatitis vaccines)

Over the past 2 decades, achieving high rates of vaccination coverage for adults at increased risk of infection with hepatitis B virus – HBV- or hepatitis A virus –HAV- has been both a challenge and very frustrating. Solving the challenges of delivering vaccine to persons in groups at increased risk of infection is what public health practitioners enjoy, and it brings out our best practices and our creativity.

A decade ago we had little experience in vaccinating high risk adults against hepatitis B. However, today there is good evidence that we can achieve reasonably high vaccination coverage in these high risk populations. Although we have less experience with hepatitis A vaccination, the lessons learned from hepatitis B vaccination should be applicable. The frustration with respect to vaccinating high risk adults is related to our inability to translate our knowledge and our "best practices" into immunization programs in every State and local health department. The primary reason that we do not have hepatitis A and hepatitis B immunization programs for adults is a lack of resources. Most adults in need of these vaccines receive healthcare and preventive services in the public sector. A number of surveys have shown that funding for vaccine purchase is the primary resource constraint. Unfortunately, the same national commitment to minimize financial barriers to vaccination of children and adolescents – namely the Vaccines For Children program – does not exist for adults at increased risk of HBV or HAV infection. On a local level, many states have committed resources to purchase hepatitis A and hepatitis B vaccines. Unfortunately, these resource commitments only cover a relatively small proportion of high risk adults. Even these efforts are in jeopardy. With the recent shortfalls in state and local budgets, many, if not most of these vaccination programs may be curtailed or reduced in scope.

So, why vaccinate certain adults against hepatitis A and hepatitis B? The reason is the high burden of disease from these infections. In 2001, over 170,000 people living in the United States were infected with HAV or HBV. And it

should be pointed out that the number of people newly infected in 2001 was at least 60% lower than the number infected annually prior to 1990.

This graphic also shows the proportion of HAV and HBV infections estimated to have occurred among adults- about 50% for HAV and about 84% for HBV. This estimate is for the period prior to 1990, since no childhood vaccination programs were in place at that time. We believe that the vast majority of HAV and HBV infections in the United States now occur among adults. Also, because HBV produces a chronic infection and a large number of deaths from chronic liver disease, this increases further the importance of the disease burden attributable to viral hepatitis.

We have childhood hepatitis B and hepatitis A vaccination programs in the United States. So wouldn't vaccination of children lower disease incidence? The answer is yes, eventually. But it will take at least several decades and we are primarily left with adults now getting the disease.

Since 1980 there has been a 67% reduction in the overall incidence of hepatitis B in the United States. This reduction follows the implementation of a number of immunization programs, including identification of hepatitis B surface antigen positive pregnant women to prevent perinatal HBV infection and vaccination of their household contacts; vaccination of adults at increased risk of occupationally acquired hepatitis B; universal vaccination of infants; and adolescent immunization. However, as might be expected, there are some significant differences in the effect of these hepatitis B immunization programs on different age groups.

Among children 10 years of age and younger, there has been an 89% decrease in disease incidence since 1990. Among adolescents 11 to 19 years of age, we see an 84% decrease in disease incidence. However, among adults during this same time period, there has been only a 67% decline – and more disturbing is that incidence has not declined during the past 3 years.

For hepatitis A, we have seen a 69% decline in disease incidence since introduction of the vaccine in 1995 and vaccination of children in states that previously had the highest disease rates. Overall U.S. rates have fallen from

about 12 to less than 4 per 100 thousand population.

Historically the highest incidence of hepatitis A has been amongst children, shown here by the red line. We have seen a dramatic decline in disease incidence among children and it appears to be continuing to decline at a steep rate. However, adults, as shown by the white line, will soon have a higher incidence of disease than children.

We believe that if we had coverage for the cost of vaccine, we could achieve reasonably high vaccination coverage among high risk persons and lower disease incidence. Let's look at hepatitis B. We know that persons with risk factors for infection receive healthcare or preventive services in settings where hepatitis B vaccination is currently recommended.

The data in this graphic clearly shows that we are not taking advantage of opportunities to vaccinate persons who subsequently go on to become infected. When we asked people with acute hepatitis B if they had been previously incarcerated or treated for a sexually transmitted disease, approximately 50% said that they had. However, these missed opportunities varied by risk group. Most persons had been treated for an STD and a substantial proportion had been previously incarcerated. The information in this graphic also makes another point, namely that we must integrate prevention services in settings that access high-risk adults.

So what are some of these settings? And why should we integrate viral hepatitis prevention services with other prevention services? We are talking about places that serve persons at risk for STDs, HIV/AIDS and viral hepatitis. These settings are STD clinics, HIV/AIDS counseling and testing sites, drug abuse treatment programs, corrections health programs and primary care clinical programs that serve high risk populations. These are settings that to a varying degree serve persons with risk factors that include high risk sex, such as having multiple partners or unprotected sex; men having sex with other men; and injection and non-injection drug use. These risk factors overlap for acquisition of HAV, HBV, hepatitis C and HIV infection. When a client comes to a health care provider in any one of these settings, their expectation is that we take a holistic view of their healthcare and prevention needs. That means taking an appropriate risk

factor history and providing the appropriate prevention services on-site.

The most experience in vaccinating high risk adults comes from STD clinics where it has been shown that hepatitis B vaccination can be readily incorporated into the workflow of the program. This includes the use of simple, self-administered screening questionnaires, primarily to exclude previously vaccinated persons and persons known to have had HBV infection – and to provide a limited amount of counseling about the need for vaccination.

It has been shown that this counseling in STD clinics significantly increases and achieves a high rate of first dose coverage. The problem in this and most other settings is achieving a similar high vaccination rate for the second and third doses because of the transient nature of the population. However, because many of these clients return to these and other public sector clinic settings, use of a tracking system has the very real potential to improve coverage. The goal of vaccination in a setting is to initiate the vaccine series and to make every reasonable attempt to complete the series, since even a single dose of hepatitis B vaccine gives a moderate amount of protection from HBV infection.

Vaccination coverage in HIV/AIDS counseling and testing sites, especially those with anonymous counseling and testing, has been lower. The reason is that these are usually settings in which there are not health care providers who can administer vaccine. One lesson learned from all of the projects is that vaccine must be given at the time of the encounter. Sending a client to another site or even “down the hall”, results in poor coverage rates.

Lastly, jails are probably our greatest challenge for vaccination in what may be termed non-traditional sites. A number of short-term demonstrations have shown that high rates of first dose coverage can be achieved in this setting and that this is the best venue to reach injection drug users, namely before they become infected with either HAV or HBV. However, because of the generally short period of incarceration and the tremendous staffing problems, it has been difficult to sustain vaccination even in demonstration projects. On the other hand, vaccination in longer term facilities such as prisons is quite feasible

and achieves high rates of coverage.

So, how do we improve vaccination levels with limited resources? It's important to realize that there are a number of public health providers and leaders in your community that are already interested in this issue. In many state and local jurisdictions, the issue of vaccination of high risk adults has become a part of the agenda of directors of HIV/AIDS programs, STD programs, substance abuse treatment programs, corrections health, and immunization programs. CDC has funded people in most states and in a number of large metropolitan health departments to provide coordination and subject matter expertise in the area of viral hepatitis prevention and control. These are your hepatitis B and hepatitis C coordinators. Get to know them. Sit down with them and develop strategies to improve vaccination coverage rates. For those programs without funding, develop a funding strategy for hepatitis B and hepatitis A vaccination. And be sure your local or state immunization program is part of the process to develop that strategy.

Another valuable source of assistance and ideas can come from programs that already provide vaccination. The Immunization Action Coalition has a special web site where programs for high-risk adults are highlighted. While it's likely that vaccination programs for high-risk adults will need to be customized for your area, it isn't necessary to completely reinvent the wheel. Only by individual efforts in individual communities will we make inroads on lowering the incidence of hepatitis B and hepatitis A among adults. Please get involved. You can make a difference.

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